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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,816	03/23/2004	Cary A. Jardin	XP.001CP1	4397

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EXAMINER

KIM, PAUL

ART UNIT PAPER NUMBER

2161

DATE MAILED: 12/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. . 10/807,816	Applicant(s) JARDIN, CARY A.	
	Examiner Paul Kim	Art Unit 2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 13 October 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 11-19 and 30-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-19 and 30-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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### **DETAILED ACTION**

1. This Office action is responsive to the following communication: Amendment filed on 13 October 2006.

#### ***Response to Amendment***

2. Claims 11-19 and 30-37 are pending and present for examination.
3. Claims 1-10 and 20-29 have been cancelled.
4. No claims have been added.
5. No claims have been amended.

#### ***Election/Restrictions***

6. Applicant's election without traverse of claims 11-19 and 30-37 in the reply filed on 13 October 2006 is acknowledged.

#### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 11-19 and 30-37** are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein et al (U.S. Patent No. 6,397,227, hereinafter referred to as KLEIN), filed on 6 July 1999, and issued on 28 May 2002, in view of Official Notice.

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9. **As per independent claims 11 and 30, KLEIN, in view of Official Notice, discloses:**

A method of distributing a database write command to a persistent storage device and to a volatile storage database system and distributing a database read command to the volatile storage database system, the method comprising:

receiving a database command via a network {See KLEIN, C6:L44-67, wherein this reads over "a network or other communication interface 108 for communicating with other computers"}, wherein said database command comprises a read command and a write command, and wherein said read command and said write command comprise a database table name {See KLEIN, C16:L58-67, wherein this reads over "[t]he delete and update features of the present invention provide a destructive read capability and a 'read modify write' capability in conjunction with streaming access to a database table"};

transmitting data related to said database command over said network<sup>1</sup>;

receiving said write command<sup>2</sup>;

generating a trigger in response to said write command {See KLEIN, C8:L21-24, wherein this reads over "[t]he execution tree contains all the components for executing an SQL statement, including integrity checks, firing triggers, and the body of an invoked SQL stored procedure"}, wherein said trigger comprises execution of instructions that cause a persistent storage device and a volatile storage database system to be updated according to said database table name and said data related to said database command {See KLEIN, C11:L66-C12:L6, wherein this reads over "whenever an update or insert operation is performed, the corresponding disk file is updated"};

receiving said read command<sup>3</sup>; and

directing said read command to said volatile storage database system<sup>4</sup>.

Additionally, it would have been obvious to one of ordinary skill in the art at the time the invention was made to direct the read command to the volatile storage database system since volatile storage, commonly comprised of cache and RAM, may be accessed for high-speed data retrieval. Furthermore, it would have been obvious to one of ordinary skill in the art at the time

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<sup>1</sup> The Examiner takes Official Notice that it would have been obvious to one of ordinary skill in the art at the time the invention was made to transmit data related to a database command over a network wherein a network may be comprised of a plurality of persistent storage devices, volatile storage database systems, and a server.

<sup>2</sup> The Examiner takes Official Notice that it would have been obvious to one of ordinary skill in the art at the time the invention was made to receive the write command since when a write command is sent, it would be obvious for some device or apparatus to receive the write command.

<sup>3</sup> The Examiner takes Official Notice that it would have been obvious to one of ordinary skill in the art at the time the invention was made to receive the read command where a read command is sent.

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the invention was made to update both the persistent storage device and the volatile storage database system, since it is well-known within the art to write data to a volatile storage database system, such as those found in cache, and a persistent storage device as a backup.

**10. As per dependent claims 12 and 31, KLEIN, in view of Official Notice, discloses:**

The method of claim 30, further comprising:

committing a modification to a database record by accepting said modification to said database record {See KLEIN, C12:L1-6, wherein this reads over "if the update operation is being executed in the context of a transaction, the updates to the file are not permanent until the transaction commits and therefore the updated or inserted rows are locked to prevent other table access operators from using the information in these rows"}; and

undoing said modification to said database record by restoring said database record to its previous contents {See KLEIN, C2:L61-C3:L7, wherein this reads over "an execution engine that, upon rollback of an aborted transaction, has the ability to set fields of the rows that are updated or deleted by the transaction prior to aborting"}.

**11. As per dependent claims 13 and 32, KLEIN, in view of Official Notice, discloses:**

The method of claim 31, further comprising locking said database record during said modification of said database record {See KLEIN, C10:L53-67, wherein this reads over "[a] row may be locked (in a conflicting mode) when it is in use by a concurrent transaction other than the transaction associated with the current table access operator"}.

**12. As per dependent claims 14 and 33, KLEIN, in view of Official Notice, discloses:**

The method of claim 32, further comprising unlocking said database record upon completion of said modification of said database record {See KLEIN, C11:L60-65, wherein this reads over "how transaction termination (which causes locks to be released) make those rows available for processing and also cause delta scans to be rescheduled for processing the newly available rows"}.

**13. As per dependent claims 15 and 34, it would have been obvious to one of ordinary skill in the art at the time the invention was made to receive results data from the volatile storage database system wherein a read command had been received by the volatile storage database system. It is well-known within the art for a database system, having received a read command, to respond by transmitting results data corresponding to the read command.**

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<sup>4</sup> The Examiner takes Official Notice that it would have been obvious to one of ordinary skill in the art at the time the invention was made to direct a read command to the volatile storage database system since volatile storage database systems are configured for high-speed access and retrieval of data.

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14. **As per dependent claim 16**, it would have been obvious to one of ordinary skill in the art at the time the invention was made to generate a corresponding database server command from the database command such that the corresponding database command may be used to access the device. Without the generation of the database command, the database server would be unable to properly process the database command received from the network interface processing module.

15. **As per dependent claims 17 and 35**, KLEIN, in view of Official Notice, discloses:

The system of claim 30, wherein said transmitting of said write command is performed in a batch processing mode {See KLEIN, C11:L25-37, wherein this reads over "[t]he delta scan procedure processes any additional rows of data that are ready for processing, and then 'goes to sleep' on the DeltaScan waiters list until more rows of data are ready for processing"}.

16. **As per dependent claims 18 and 36**, KLEIN, in view of Official Notice, discloses:

The system of claim 30, wherein directing said read command is to either said persistent storage device or to said volatile storage database system according to said database table name {See KLEIN, C16:L58-67, wherein this reads over "[t]he delete and update features of the present invention provide a destructive read capability and a 'read modify write' capability in conjunction with streaming access to a database table"}.

17. **As per dependent claims 19 and 37**, the transmission of the write command to the persistent storage and to the volatile storage database system at different times would be inherent to the claimed invention since a single trigger processing module would be unable to concurrently transmit commands to both the persistent storage and the volatile storage database system.

### ***Conclusion***

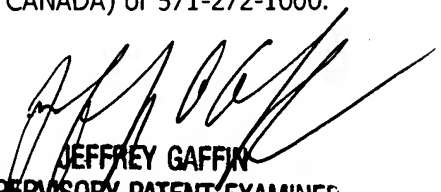
18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Kim whose telephone number is (571) 272-2737. The examiner can normally be reached on M-F, 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on (571) 272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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